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ABSTRACT

Educators are under increasing pressure from policymakers and the public to demonstrate that educational resources are used in appropriate ways. This demand, coupled with an environment of increased standards and shrinking budgets, is a major challenge to rural, small, and low-income schools. This digest reviews contemporary research on resource allocation issues in rural and small schools. Structural constraints that can complicate the resource allocation process for rural and small schools include fragmented school schedules; federal and state guidelines for curriculum offerings, teacher certification, and special services; inflexible job definitions for teachers; and specialized programs that may be peripheral to the academic mission. Meta-analyses and literature reviews have shown a high level of inconsistency across studies of the cost-effectiveness of various educational investments such as class-size reduction and teacher salaries. Policymakers and school leaders may find guidance and support for meeting the challenges of resource allocation through creative reallocation of existing resources, consideration of successful whole-school reform models, and pursuit of nontraditional revenues and new funding streams targeted explicitly for rural, small, and low-income schools. (SV)

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Resource Allocation in Rural and Small Schools

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This Digest reviews contemporary research on resource allocation issues in rural and small schools, paying particular attention to (1) factors affecting resource allocation decisions; (2) making cost-effective resource allocation decisions; (3) whole-school reform as a potential guide for resource allocation; and (4) resource strategies for rural schools that are both small and poor.

Rural districts across the country have invested heavily to meet higher achievement standards set by states and goals set by the No Child Left Behind Act (NCLB) (AASA & NASBE, 2003). The testing, accountability, and teacher quality provisions of the legislation are particularly challenging for rural school systems, which tend to be smaller, geographically isolated, and alternatively staffed (Reeves, 2003). These same districts now face the challenge of meeting recent mandates with fewer resources. Small rural school systems seem particularly vulnerable to programmatic cuts as states and localities respond to an environment of reduced revenues and budget deficits.

Factors Affecting Resource Allocation Decisions in Rural and Small Schools

Miles and Darling-Hammond (1998) identified structural constraints that can complicate the resource allocation process,

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including (1) fragmented school schedules, (2) inflexible job definitions for teachers, and (3) specialized programs that may be peripheral to the academic mission. Rural and small schools must be particularly attentive to these constraints as they often confront a series of resource allocation challenges not fully shared by their larger urban and suburban counterparts (Brent, Roellke, & Monk, 1997).

Local education agencies, for example, are required to follow federal and state guidelines for curriculum offerings, graduation requirements, provision of special education services, teacher certification, and so on. With restricted resource bases and limited numbers of staff members, meeting these guidelines can be difficult. Since teachers represent the single greatest fiscal investment made in education, staffing considerations are among the most important resource allocation decisions for educators. Rural and small schools, for example, may rely heavily on teachers who possess multiple subject-area and grade-level certifications. Alternatively, these school systems may need to justify out-of-certification area assignments for selected staff members. Due to their comparatively small size, rural school systems may also operate an academic schedule with a number of singleton offerings or require the sharing of staff members across buildings.

It is important to consider this staffing complexity in light of the new teacher quality provisions of NCLB. The legislation requires that all teachers in core academic subjects be "highly qualified" by the 2005-2006 school year. The teacher recruitment and retention

difficulties in rural schools are well known and may be exacerbated by these new federal polices (Reeves, 2003). Low-income rural schools face the challenge of recruiting teachers to geographically isolated areas in a highly competitive labor market for educators, particularly in hard-to-staff subject areas such as mathematics, science, foreign language, and special education (Reeves, 2003).

Despite these resource constraints, many researchers point to the benefits of small-scale schooling, including improved efficiency in service delivery, feasibility of democratic practices, and collective accountability for student performance (Meier, 1995, Public Education Association, 1992). Researchers have also commended rural and small schools for their creative use of resources, such as providing longer and more varied blocks of instructional time and designing flexible teacher schedules and work definitions (Miles & Darling-Hammond, 1998). Others have demonstrated the potential cost-effectiveness of smaller schools in both rural and urban areas, including lower costs per graduate (Bingler et al., 2002; Stiefel, Iatarola, Fruchter, & Berne, 1998). Additional research is needed to better identify the economies and diseconomies associated with the size and scope of schooling operations.

Making Cost-Effective Resource Allocation Decisions

The educational policy terrain continues to be flooded with options like class size reduction, alternative scheduling, summer enrichment, early intervention programs, and a wide array of whole-

school reform models (Rice & Roellke, 2003). Successful implementation of these initiatives is highly dependent on a variety of contextual factors, including student demographics, fiscal capacity, school size, spending level, and district/school governance (Brent et al., 1997). This is certainly the case in all schools, but it is especially challenging for rural and small school educators, who often operate under considerable fiscal constraints (Reeves, 2003). Further, researchers offer little definitive evidence on the costs and benefits of alternative investment options, information that would be very helpful to local leaders facing a multitude of policy and program alternatives and a limited stock of resources.

A series of meta-analyses and literature reviews by Hanushek (1981, 1986, 1996, 1997), for example, have shown a high level of inconsistency and lack of significance in findings across studies that estimate the impact of various types of educational investments, including class-size reduction, teacher salaries, and special education. On the other hand, researchers who have reanalyzed Hanushek's data, challenging both his assumptions and his basic "vote counting" methodology, have reported more positive and consistent interpretations of the same set of studies (Hedges, Laine, & Greenwald, 1994; Krueger, 2002). In light of these research discrepancies and in the absence of definitive cost-effectiveness studies, rural educators may find valuable resource allocation guidance in the form of whole-school reform models.

Whole-School Reform as a Potential Guide for Resource Allocation

Comprehensive and whole-school reform models have received considerable attention in education reform circles as promising alternatives for improving student performance. This approach to reform is attractive in that each model prescribes a configuration of resources intended to have a positive effect on the entire educational experience of students during their elementary and/or secondary school years (Rice, 2001). The challenge for rural educators is to assess the resource intensity of competing models and to determine the local capacity for adoption of such models.

Research that examines both the implementation process and achievement effects of these comprehensive reform strategies also has yielded mixed results.[1] Methodological challenges, including contextual differences across model sites and the lack of randomized experiments, make it difficult to draw useful conclusions. It is clear, however, that successful adoption of whole-school reform for rural schools requires a careful, inclusive model selection process and ongoing support and guidance from model developers (Erlichson & Goertz, 2002; Hertling, 1999). In addition, comprehensive reforms need longitudinal study with a specific focus on cost-effectiveness (Bifulco, 2002; Levin & McEwan, 2001).

Resource Strategies for Small, Rural, Low-Income Schools

[1] For a review of the evidence of comprehensive school reform models on student achievement, see American Institutes for Research (1999) and Borman, Hewes, Overman, & Brown (2001).

In our current environment of fiscal austerity, it is quite possible that rural educators will need to rely more heavily on alternative revenue streams to support programmatic initiatives and other reform efforts. Although it is possible to increase operating funds through challenges to state funding formulas, this type of change is difficult to leverage, particularly in the short term (Roellke, Green, & Zielewski, in press). More immediate benefits can be achieved through reconfiguration of existing resources, a strategy employed by many of the whole-school reform models discussed above (Picus, 2000; Rice, 2001). Researchers have described strategies, for example, for shared use of facilities, partnering with other community agencies, and creative financing of capital costs (Bingler et al., 2002).

School leaders and policymakers sometimes also take advantage of a broader resource base than traditional federal, state, and local tax revenue streams (Haas, 2000). Examples include fiscal and personnel support derived from nontraditional sources, including private foundations, volunteer networks, and other human service agencies. The Rural Education Achievement Program (REAP) is a federal grant program specifically targeted to assist rural and small schools in their efforts to meet requirements of NCLB. It is also possible for small and low-income schools to consolidate funds from a variety of federal programs, including Teacher Quality grants, Safe and Drug-Free Schools grants, and Local Technology grants (Reeves, 2003). These and other nontraditional resources can provide for a variety of school services,

including parental involvement activities, tutoring, vocational counseling, technological enhancements, literacy programs and teacher recruitment and professional development (AASA & NASBE, 2003; Schwartz, Bel Hadj Amor, & Fruchter, 2002).

Conclusions

Educators are under increasing pressure from policymakers and the public to demonstrate that educational resources are used in appropriate ways. This demand, coupled with an environment of increased standards and shrinking budgets, is a major challenge for rural, small, and low-income schools. Policymakers and school leaders may find guidance and support for meeting this challenge through (1) creative reallocation of existing resources; (2) consideration of successful whole-school reform models; and (3) non-traditional revenues and new funding streams that are targeted explicitly for rural, small, and low-income schools.

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